CLAIMS

1.   A feature changed image generating method for generating a new image from an input image, comprising:

5   providing a database in which a plurality of data, which are relating to a plurality of images respectively, are classified into a plurality of categories;

            determining an image which is most similar to 10 said input image as a selected image based on a data belonging to a specified category specified from said plurality of categories; and

            merging said selected image and said input image.

15

2.   The feature changed image generating method according to claim 1,

            wherein a database in which said plurality of images are classified into said plurality of 20 categories is provided in said providing, and

            an image which is most similar to said input image among images belonging to said specified category is selected as said selected image in said determining.

25

3.   The feature changed image generating method according to claim 1,

wherein a database in which constituent components of said plurality of images are classified into said plurality of categories is provided in said providing, and

5   said determining includes:

determining a determined combination of said constituent components by which an image which is most similar to said input image is obtained by using said constituent components belonging to said specified

10 category; and

generating an image which is most similar to said input image as said selected image based on said determined combination.

15   4.   The feature changed image generating method according to claim 1,

wherein a database in which said plurality of images are classified into said plurality of categories is provided, and each of said plurality of

20 categories includes a plurality of images which are gradual variations of an identical object on an attribute, and

said determining includes:

selecting an image which is most similar to

25 said input image among images belonging to a category included in said plurality of categories and corresponding to an attribute of said input image as a

similar image; and

determining an image relating to a same object with said similar image as said selected image from images belonging to said specified category.

5

5.   The feature changed image generating method according to claim 1,

wherein a database in which constituent components of said plurality of images are classified into said plurality of categories is provided, and each of said plurality of categories includes constituent components of a plurality of images which are gradual variations of an identical object on an attribute, and

said determining includes:

selecting a selected combination of said constituent components by which an image which is most similar to said input image is obtained, by using said constituent components belonging to a category included in said plurality of categories and corresponding to an attribute of said input image;

converting component coefficients corresponding to said selected combination into converted coefficients which are component coefficients corresponding to said specified category; and

generating said selected image by using said

converted coefficients and said constituent components belonging to said specified category.

6.   The feature changed image generating method

5 according to any of claims 1 to 5,

        wherein each of said plurality of images is a face image of a person, and

        said plurality of categories are categorized based on an age.

10

7.   The feature changed image generating method according to claim 6,

        wherein a category included in said plurality of categories and corresponding to an age higher than

15 said specified age is selected as said specified category when an age of a person on said input image is lower than an age specified by a user.

8.   The feature changed image generating method

20 according to claim 6,

        wherein a category included in said plurality of categories and corresp -45- -45-onding to an age lower than said specified age is selected as said specified category when an age of a person in said

25 input image is higher than an age specified by a user.

9.   A feature change applying method for gradually

applying a feature change to an input image,

comprising:

    providing a database in which constituent

components of a plurality of images are classified

5 into a plurality of categories, wherein each of said

plurality of categories includes constituent

components of a plurality of images which are gradual

variations of an identical object on an attribute;

    selecting a selected combination of said

10 constituent components by which an image which is most

similar to said input image is obtained, by using said

constituent components belonging to a category

included in said plurality of categories and

corresponding to an attribute of said input image; and

15   converting component coefficients

corresponding to said selected combination into

converted coefficients which are component

coefficients corresponding to said specified category.

20 10.   The feature change applying method according

to claim 9,

    wherein each of said plurality of images is a

face image of a person, and

    said plurality of categories are categorized

25 by based on an age.

11.   A feature changed image generating apparatus

for generating a new image from an input image, comprising:

a storing unit configured to store a plurality of data which are relating to a plurality of images

5   respectively and classified into a plurality of categories;

an image determining unit configured to determine an image which is most similar to said input image as a selected image based on a data belonging to

10 a specified category specified from said plurality of categories; and

a merging unit configured to merge said selected image and said input image.

15 12.   The feature changed image generating apparatus according to claim 11,

wherein said plurality of images are classified into said plurality of categories in said storing unit, and

20   said image determining unit determines an image which is most similar to said input image among images belonging to said specified category as said selected image.

25 13.   The feature changed image generating apparatus according to claim 11,

wherein a constituent components of said

plurality of images are classified into said plurality of categories in said storing unit, and

said image determining unit determines a determined combination of said constituent components

5　by which an image which is most similar to said input image is obtained by using said constituent components belonging to said specified category, and generates an image which is most similar to said input image as said selected image based on said determined

10　combination.

14.　The feature changed image generating apparatus according to claim 11,

wherein said storing unit stores said

15　plurality of images classified into said plurality of categories ,and each of said plurality of categories includes a plurality of images which are gradual variations of an identical object on an attribute, and

said image determining unit selects an image

20　which is most similar to said input image among images belonging to a category included in said plurality of categories and corresponding to an attribute of said input image as a similar image, and determines an image relating to a same object with said similar

25　image as said selected image from images belonging to said specified category.

15.   The feature changed image generating apparatus according to claim 11,

wherein constituent components of said plurality of images are classified into said plurality of categories in said storing unit, and each of said plurality of categories includes constituent components of a plurality of images which are gradual variations of an identical object on an attribute, and

said image determining unit selects a selected combination of said constituent components by which an image which is most similar to said input image is obtained, by using said constituent components belonging to a category included in said plurality of categories and corresponding to an attribute of said input image, converts component coefficients corresponding to said selected combination into converted coefficients which are component coefficients corresponding to said specified category, and generates said selected image by using said converted coefficients and said constituent components belonging to said specified category.

16.   The feature changed image generating apparatus according to any of claims 11 to 15,

wherein each of said plurality of images is a face image of a person, and

said plurality of categories are categorized

based on an age.

17.   The feature changed image generating apparatus according to claim 16, further comprising a selecting
5 unit,

wherein said selecting unit selects a category included in said plurality of categories and corresponding to an age higher than said specified age as said specified category when an age of a person on
10 said input image is lower than an age specified by a user.

18.   The feature changed image generating apparatus according to claim 16, further comprising a selecting
15 unit,

wherein said selecting unit selects a category included in said plurality of categories and corresponding to an age lower than said specified age as said specified category when an age of a person on
20 said input image is higher than an age specified by a user.

19.   A feature change applying apparatus for gradually applying a feature change to an input image,
25 comprising:

a storing unit in which constituent components of a plurality of images are classified into a

plurality of categories; and

a component coefficient converting unit,

wherein each of said plurality of categories

includes constituent components of a plurality of

5 images which are gradual variations of an identical

object on an attribute, and

said component coefficient converting unit

selects a selected combination of said constituent

components by which an image which is most similar to

10 said input image is obtained, by using said

constituent components belonging to a category

included in said plurality of categories and

corresponding to an attribute of said input image, and

converts component coefficients corresponding to said

15 selected combination into converted coefficients which

are component coefficients corresponding into said

specified category.

20.   The feature change applying apparatus

20 according to claim 19,

wherein each of said plurality of images is a

face image of a person, and

said plurality of categories are categorized

based on an age.

25

21.   A feature changed image generating program for

generating a new image from an input image executed by

a computer, comprising a storing device storing a
plurality of data which are relating to a plurality of
images respectively and classified into a plurality of
categories, and

5   the feature changed image generating program
causes the computer to execute:

          determining an image which is most similar to
said input image as a selected image based on a data
belonging to a specified category specified from said
10 plurality of categories; and

          merging said selected image and said input
image.

22.   The feature changed image generating program
15 according to claim 21,

          wherein said plurality of images are
classified into said plurality of categories in said
storing device, and

          the feature changed image generating program
20 causes the computer to execute determining an image
which is most similar to said input image among images
belonging to said specified category as said selected
image.

25 23.   The feature changed image generating program
according to claim 21,

          wherein constituent components of said

plurality of images classified into said plurality of categories are stored in said storing device, and

the feature changed image generating program causes the computer to execute:

5   determining a determined combination of said constituent components by which an image which is most similar to said input image is obtained by using said constituent components belonging to said specified category; and

10   generating an image which is most similar to said input image as said selected image based on said determined combination.

24.   The feature changed image generating program
15 according to claim 21,

wherein said storing device stores said plurality of images classified into said plurality of categories, and each of said plurality of categories includes a plurality of images which are gradual
20 variations of an identical object on an attribute, and

the feature changed image generating program causes the computer to execute:

selecting an image which is most similar to said input image among images belonging to a category
25 included in said plurality of categories and corresponding to an attribute of said input image as a similar image; and

determining an image relating to a same object with said similar image as said selected image from images belonging to said specified category.

5 25.   The feature changed image generating program according to claim 21,

wherein said storing device stores constituent components of said plurality of images classified into said plurality of categories, and each of said
10 plurality of categories includes constituent components of a plurality of images which are gradual variations of an identical object on an attribute, and

said feature changed image generating program causes the computer to execute:
15   selecting a selected combination of said constituent components by which an image which is most similar to said input image is obtained, by using said constituent components belonging to a category included in said plurality of categories and
20 corresponding to an attribute of said input image;

converting component coefficients corresponding to said selected combination into converted coefficients which are component coefficients corresponding to said specified category;
25 and

generating said selected image by using said converted coefficients and said constituent components

belonging to said specified category.

26.   A feature change applying program for
gradually applying a feature change to an input image
5 executed by a computer,

wherein the computer has a storing device in
which constituent components of a plurality of images
are classified into a plurality of categories, and
each of said plurality of categories includes
10 constituent components of a plurality of images which
are gradual variations of an identical object on an
attribute, and

the feature change applying program causes the
computer to execute:
15   selecting a selected combination of said
constituent components by which an image which is most
similar to said input image is obtained, by using said
constituent components belonging to a category
included in said plurality of categories and
20 corresponding to an attribute of said input image; and
converting component coefficients
corresponding to said selected combination into
converted coefficients which are component
coefficients corresponding to said specified category.